UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,772	06/26/2003	Eran Steinberg	FN-102E-US	8147

72104 7590 02/28/2008		EXAMINER	
FotoNation		SETH, MANAV	
IP Dept.			
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Suite 522			
Burlingame, CA 94010		2624	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _11 December 2007_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-4 and 29-32_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-4 and 29-32_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   The amendment received on December 11, 2007 has been entered in full.

2.   Applicant's arguments with respect to rejected claims as presented in the amendment filed have been fully considered but are not persuasive; therefore all the rejections made previously still stand.

Response to Arguments

3.   Applicant's arguments regarding the prior art rejections under Calia on pages 5-10 of the Amendment filed on December 11, 2007 have been fully considered but are not persuasive.

4.   In the Amendment, Applicant argues in substance:

a. *Calia does not disclose determining initial values of pixel parameters of pixels corresponding to the facial features as claimed. Additionally, Calia does not use the initial values of the pixel parameters, or any values of the pixel parameters to determine spatial parameters as claimed.*

The Examiner respectfully disagrees. First of all, examiner really wonders (as per applicant's arguments) how a person of ordinary skill in the art of image processing would be able to adjust or correct an image without first knowing what he/she is going to correct or adjust. Calia in col. 2, lines 46-51 clearly teaches the extraction of features from the image by an system, and examiner here asserts that system cannot directly identify the features, it has to identify each and every pixel based on it's value (initial or default value) to provide segmentation of the features. Calia

clearly discloses that certain 11 facial key points are required to be calculated and from these 11 facial key points, 6 lengths or measurements are taken and Calia further discloses that in order to calculate these key points eyes are used and further discloses that eye white, eye pupils, eye inner and outer edges are required to be extracted to define such points (col. 5,lines 45-55). Now, clearly a system would calculate or differentiate the eye white from the eye pupils (eye black) using the initial values of pixels of eyes and thus would be able to extract an eye pupil from the eye white or differentiate edges in the eyes, and all other steps for extracting additional features or key facial points or calculating spatial parameters as defined in (col. 5, lines 55 through col. 7, lines 1-45) are based on the initial values of the eye pixels. Calia discloses calculating head tilt (col. 7, lines 25-30) where head tilt apparently defines the face orientation (where tilt or orientation being the spatial parameter) and in Calia head tilt is calculated based on edge points in the eyes, where edges are defined by the values of the eyes as explained before. Therefore, examiner respectfully disagrees with the applicant's arguments that "Calia does not disclose determining initial values of pixel parameters of the one or more subgroups of pixels and Calia does not disclose determining an initial spatial parameter of the face with in the digital image based on the initial values".

Applicant further argues in substance "Calia discloses that the PVS data base image is transformed into the target image's spatial coordinates (i.e. the database image is not transformed into the target image or vice versa). The database image parameters are not disclosed being "desired" and no adjusted values of pixels are determined. Moreover, adjusting the image is not disclosed, but rather the transformation is of the reference image into the spatial coordinates of the target image in order to effect a comparison". Examiner respectfully disagrees. Examiner here asserts that like two teams on a sports field, Calia discloses two teams of images. On team A is the target image and team

B recites the data base images, and examiner is on team B side and therefore sees what team B sees.

Therefore, here the Target image has the desired features or desired pixel values and thus desired

spatial parameters, and team B image wants to get or achieve those parameters. Now, since images

are already there or provided, in order to achieve desired parameters, image are adjusted or

transformed to the parameters as desired, therefore transforming and adjusting recite the same

meaning. Calia discloses geometrical (col. 9, lines 5-8 – achieving the desired orientation same as the

target image) and intensity (col. 9, lines 16-19) transformation (adjustment) on the database image to

achieve desired image parameters (col. 8, lines 30-68 through col. 9, lines 1-35), where geometrical

and intensity adjustments to the image are apparently done based on the values of pixel parameters,

since image is nothing but a group of pixels.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this
>
> country, more than one year prior to the date of application for patent in the United States.

6.   Claims 1-4 and 29-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Calia U.S.

Patent No. 5,450,504.

Regarding claim 1, Calia discloses identifying a group of pixels that corresponds to a face

within a digital image (figure 3, col. 4, lines 15-25, Calia discloses a method and system to detect

faces in images and then find a target image in the database by comparing the faces and apparently a

system can only detect a face by detecting the pixels associated to the face),

Calia further discloses identifying one or more sub-groups of pixels that corresponds to one

or more facial features of the face (col. 4, lines 15-25, col..5, lines 33 – 68 through col. 7, lines 1-30 –

system identifying pixels of facial features such as eyes and nose),

Calia further discloses determining initial values of one or more parameters of pixels of the

one or more subgroups of pixels (col. 5, lines 49-51, col. 6, lines 40-60, determining initial values of

black and white pixels related to eye). Calia in col. 2, lines 46-51 clearly teaches the extraction of

features from the image by an system, and examiner here asserts that system cannot directly identify

the features, it has to identify each and every pixel based on it's value (initial or default value) to

provide segmentation of the features. Calia clearly discloses that certain 11 facial key points are

required to be calculated and from these 11 facial key points, 6 lengths or measurements are taken

and Calia further discloses that in order to calculate these key points eyes are used and further

discloses that eye white, eye pupils, eye inner and outer edges are required to be extracted to define

such points (col. 5,lines 45-55). Now, clearly a system would calculate or differentiate the eye white

from the eye pupils (eye black) using the initial values of pixels of eyes and thus would be able to

extract an eye pupil from the eye white or differentiate edges in the eyes, and all other steps for

extracting additional features or key facial points or calculating spatial parameters as defined in (col.

5, lines 55 through col. 7, lines 1-45) are based on the initial values of the eye pixels.,

Calia further discloses determining an initial spatial parameter of the face within the digital

image based on the initial values (col. 5, lines 33 – 68 through col. 7, lines 1-30 – teaches using facial

feature's initial pixel values to determine head tilt where head tilt (col. 7, lines 25-30) apparently

defines the face orientation (where tilt or orientation being the spatial parameter)) and in Calia head

tilt is calculated based on edge points in the eyes, where edges are defined by the values of the eyes

as explained before,

Calia further discloses determining adjusted values of pixels within the digital image for

adjusting the image based on a comparison of the initial and desired spatial parameters (Calia

discloses performing geometrical transformation and intensity transformation to adjust the image

from the initial spatial parameter to the desired spatial parameter where the desired spatial parameter

being the same as the spatial parameters of the target image – col. 8, lines 44-68 through col. 9, lines

1-35). Examiner here asserts that like two teams on a sports field, Calia discloses two teams of

images. On team A is the target image and team B recites the data base images, and examiner is on

team B side and therefore sees what team B sees. Therefore, here the Target image has the desired

features or desired pixel values and thus desired spatial parameters, and team B image wants to get

or achieve those parameters. Now, since images are already there or provided, in order to achieve

desired parameters, image are adjusted or transformed to the parameters as desired, therefore

transforming and adjusting recite the same meaning. Calia discloses geometrical (col. 9, lines 5-8 –

achieving the desired orientation same as the target image) and intensity (col. 9, lines 16-19)

transformation (adjustment) on the database image to achieve desired image parameters (col. 8, lines

30-68 through col. 9, lines 1-35), where geometrical and intensity adjustments to the image are

apparently done based on the values of pixel parameters, since image is nothing but a group of

pixels.

Regarding claim 2, the subject matter of this claim has been addressed in the rejection of claim 1 and therefore, claim 2 has been similarly analyzed and rejected as per claim 1.

Regarding claim 3, Calia discloses automatically adjusting the values of pixels within the digital image to adjust the initial spatial parameter approximately to the desired spatial parameter (col. 15, lines 65-67 – no human in the loop).

Regarding claim 4, Calia discloses automatically providing an option for adjusting the values of the pixels within the digital image to adjust the initial spatial parameter to the desired spatial parameter (col. 15, lines 62-68 through col. 16, lines 1-20).

Claims 29-32 have been similarly analyzed and rejected as per claims 1-4. Further see Calia (col. 16, lines 23-62).

Examiner note: Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teaching for the art and are applied to the specific limitations within the individual claim, other passages and figures may applied as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirely as potential teaching all or part of the claimed invention, as well as the context of the a passage as taught by the prior art or disclosed by the examiner.

THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manav Seth whose telephone number is (571) 272-7456. The examiner can normally be reached on Monday to Friday from 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta, can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system,

see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system,

contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Manav Seth
Art Unit 2624
September 3, 2007

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